



Ch 3: Input from fast pulser. "T" at oscilloscope input  
 Ch 4: Output from transformer. Active probe.

143W || transformer input : 95.3W on transformer output.  
 Transformer turns ratio (p:s) 18:19 because of the way the connector is located in the middle of the toroid, and the way the shield terminates on the connector pins (effectively unwinding one turn).  
 The implied impedance reflected to the input of this transformer is about 77W. The predicted input impedance is about 85W. The real world matches theory rather poorly... (10%).

The spike on the incident edge of the pulse indicates that the transformer has some inductive reactance. This inductive reactance is often due to leakage inductance.  $TR = 5E-9 \times 50 = 250nH$ . The primary inductance is about 2.6 mH. 0.01% leakage inductance is quite good.

This transformer configuration is not what the DOM system design calls for, nevertheless, it is an interesting exercise.